

**MINUTES**  
**CALIFORNIA TRAFFIC CONTROL DEVICES COMMITTEE (CTCDC)**  
**MEETING Sacramento, June 5, 2003**

The second CTCDC meeting of 2003 was held in Sacramento, on June 5, 2003.

Vice Chairman John Fisher opened the meeting at 9:15 a.m. with the introduction of Committee Members and guests. The following Members, alternates and guests were in attendance:

<b><u>ATTENDANCE</u></b>	<b><u>ORGANIZATION</u></b>	<b><u>TELEPHONE</u></b>
<b>Members (Voting)</b>		
John Fisher	League of CA Cities	(213) 580-1189
Vice Chairman	City of Los Angeles	
Gerry Meis	Caltrans	(916) 654-4551
Farhad Mansourian	CA State Association of Counties	(415) 499-6570
	Marin County	
Bridget Lott	CHP	(916) 657-7222
Ed von Borstel	League of CA Cities	(209) 577-7222
City of Modesto		
Merry Banks	California State Automobile Association	(415) 241-8904
Jacob Babico	CA State Association of Counties	(909) 387-8186
	San Bernardino County	
<b><u>ALTERNATES</u></b>	<b><u>ORGANIZATION</u></b>	<b><u>TELEPHONE</u></b>
Gian Aggarwal	League of CA Cities	(707) 449-5349
	City of Vacaville	

<u>ATTENDEES</u>	<u>ORGANIZATION</u>	<u>TELEPHONE/E-Mail</u>
Bret P. Goss	First Call Flagging/RC Flagman	(866) 352-4446 <a href="mailto:Bret@firstcallflagging.com">Bret@firstcallflagging.com</a>
Greg McMahon	First Call Flagging/RC Flagman	(916) 765-8751 <a href="mailto:Mcmahon@usamedia.tv.com">Mcmahon@usamedia.tv.com</a>
Michael Montoya	Fortel Traffic Inc	(831) 402-5020 <a href="mailto:Mike@forteltraffic.com">Mike@forteltraffic.com</a>
Jason Nutt	Marin County	(415) 499-7137 <a href="mailto:Jnut@co.marin.ca.us">Jnut@co.marin.ca.us</a>
Gary Tsutsumi	City of Stockton	(209) 937-8611 <a href="mailto:Gary.tsutsumi@stockton.ca.us">Gary.tsutsumi@stockton.ca.us</a>
Brian Heaps	Jam Services	(925) 260-0367 <a href="mailto:Rbh0921@aol.com">Rbh0921@aol.com</a>
Andrew Lee	Caltrans/Research	(916) 654-8229
Ozzie Hilton	City of Vacaville	(707) 449-5352 <a href="mailto:Ohilton@ci.vacaville.ca.us">Ohilton@ci.vacaville.ca.us</a>
Spencer Cantwell	3M	(530) 209-1983 <a href="mailto:Sicantwell@mmmm.com">Sicantwell@mmmm.com</a>
Johnny Bhullar	Caltrans-Traffic Ops	(916) 654-7312
Susanna Chan	City of San Mateo	(650) 522-7135 <a href="mailto:Schan@cityofsanmateo.org">Schan@cityofsanmateo.org</a>
Martin Quan	City of San Mateo	(650) 522-7330 <a href="mailto:Mquan@cityofsanmateo.org">Mquan@cityofsanmateo.org</a>
Caral Pakaki	3M	<a href="mailto:cpakaki@mmm.com">cpakaki@mmm.com</a>
Bill Wald	Caltrans	(916) 608-8727
David Royer	Consulting Traffic Engineer	(661) 255-6556 <a href="mailto:droyer@earthlink.net">droyer@earthlink.net</a>
Michael A. Harrison	LightGuard System, Inc.	(707) 542-4547 <a href="mailto:Mikeh@lightguardsystem.com">Mikeh@lightguardsystem.com</a>
William Parry	LightGuard System, Inc	(707) 542-4547 <a href="mailto:Wparry@lightguardsystem.com">Wparry@lightguardsystem.com</a>
Parviz Koupai	City of Inglewood	(310) 412-4316 <a href="mailto:Pkoupai@cityofinglewood.org">Pkoupai@cityofinglewood.org</a>
Charug Chan	City of Inglewood	(310) 412-4316 <a href="mailto:Chen@cityofinglewood.org">Chen@cityofinglewood.org</a>
Brain Alconcel	Caltrans	(916) 654-6225
Lynn Mack	Polara Engineering	(714) 521-0900

## **MINUTES**

Adoption of March 12, 2003 CTCDC meeting Minutes.

**Motion:** Moved by Jacob Babico, seconded by Farhad Mansourian, to adopt the minutes of the CTCDC meeting, held on March 12, 2003 in Los Angeles. Motion carried 7-0.

## **ELECTION OF OFFICERS**

**Motion:** Moved by Gerry Meis, seconded by Merry Banks, to elect John Fisher as Chairman of the CTCDC. Motion carried 7-0.

**Motion:** Moved by Jacob Babico, seconded by Ed von Borstel, to elect Farhad Mansourian as Vice Chairman of the CTCDC. Motion carried 7-0.

## **PUBLIC COMMENTS**

Chairman Fisher asked for any public comments related to items that will not be discussed as an agenda item.

Bret Goss, President, First Call Flagging, stated that his company represents the RC Flagman throughout the western United States. The RC Flagman has been in use in Canada for the last 10 years. Bret showed a brief video, on the operation of the RC Flagman. Bret informed the Committee that three States, Ohio, Missouri and Wisconsin have demonstrated the RC Flagman under the FHWA experimentation process and the Department of Transportation, State of Ohio has submitted a final report to the FHWA. According to Bret, the RC Flagman eliminates accidents related to the flaggers in the work zone, because it is a remote control operation. Bret advised the Committee that he is working with FHWA to include this device in the MUTCD. He anticipated that the MUTCD Revision 2 would be out during the fall of this year. The motorist's response is positive.

Farhad Mansourian inquired about the cost of the system.

Bret responded that the unit could be rented for \$2000 per month or could be bought for \$30,000.

Gerry Meis asked whether FHWA has included text on the RC Flagman in the proposed Revision 2 of the MUTCD.

Bret said yes, it would be included in the Revision 2 as an interim approval.

Gerry asked Matt Schmitz of FHWA, if he could provide input on Bret comments.

Matt Schmitz stated that the device itself is not in Revision 2, but the concept in general is proposed to include an interim approval. Matt further added he would wait and see the final ruling on this item.

Chairman Fisher inquired how an agency saves money by using this system. You still need some one to operate the system.

Bret responded that the device will reduce the manpower from two to one person and secondly, it will increase the safety and reduce incidents related to the flaggers.

Greg McMohan, RC Flagman, asked how they could place this item on the agenda for a full hearing.

Chairman Fisher explained the process to place a new traffic control device on the CTCDC agenda. He added that if a public agency is willing to use this device under experiment, they should contact the CTCDC to place the item on the agenda.

Chairman Fisher asked for other comments.

(continued)

Gary Tsutsumi, City of Stockton, inquired about the status of pedestrian countdown signal heads (PCSHs) and radar speed signs in school zones. The City of Stockton would like to expand the use of both devices.

Ed von Borstel noted that during the last meeting the Committee authorized the Chairman to give approval for new experimental requests on PCSHs and the requesting agency would not have to collect before and after data.

Farhad stated that he received information that the Chairman has given approval to two local agencies by using the authority given to him by the Committee during the last CTCDC meeting.

Chairman Fisher said that the City of San Diego and the City of Brea were given approval to install PCSHs. Both cities were given the guidelines developed by the CTCDC on PCSHs and the text from Revision 2 of the MUTCD, which is very similar to the CTCDC recommendations. The MUTCD guidelines are very specific when to start the countdown numerals.

Gary Tsutsumi further asked about the use of bi-directional in-roadway warning lights (IRWLs) at cross walks.

Gerry Meis responded that the City can write a letter to him requesting approval to install IRWLs at crosswalks, and he will reply with approval as long the installation is according to the interim guidelines developed by Caltrans. Gerry advised the Committee and others that Caltrans would shortly include this in the Traffic Manual.

Gary Tsutsumi informed the Committee that the results of the radar speed sign indicated a 12-mph speed reduction in school zones. In his opinion, the device has a positive response from motorists.

Chairman Fisher asked for other comments from the audience. There were none.

#### **AGENDA ITEMS (PUBLIC HEARING)**

##### **01-11 Temporary or Portable Radar (Speed Feedback) Speed Sign**

Chairman Fisher asked Gerry Meis to introduce this item.

Gerry Meis noted that this item was tabled by the CTCDC, to wait for a final ruling by FHWA on the speed feedback sign in Revision 2 of the MUTCD. At the same time, the Committee has authorized experimentation with the radar speed signs in school zones. The purpose was to find the proper location and message of the sign with existing school signing. Gerry advised the Committee that he would like to see the Committee make a recommendation to Caltrans to adopt the text from Section 2B.11 of the MUTCD Revision 2. The text is as follows:

*"A changeable message sign that displays to approaching drivers the speed at which they are traveling may be installed in conjunction with a Speed Limit sign. If a changeable message sign displaying approach speeds is installed, the legend YOUR SPEED XX km/h (MPH) or such similar legend should be shown."*

The reason is that a number of agencies are asking permission for the installation of this sign. The MUTCD text is very clear that "your speed" sign may be used with the speed limit sign.

Chairman Fisher asked whether the proposal is to adopt the text exactly as shown in the agenda packet.

Gerry responded yes, unless the Committee believes that California should specify the installation of the sign above or below the speed limit sign. But, he would prefer any modification could be discussed during

the process to adopt the MUTCD. This would also provide some experience with the operation of sign to make a better decision. Gerry added that "radar speed feedback" have been installed and there are other agencies wanting to install the signs. The FHWA has proposed language in Revision 2.

Farhad Mansourian stated that he supports the idea. He added that the Office of Traffic Safety is providing grants for this device and public agencies are interested in installing the device.

(continued)

Chairman Fisher asked whether it would be premature to adopt language which has not been adopted by the FHWA.

Jacob Babico suggested that the Committee could recommend adopting the device without reference to the MUTCD.

Farhad added that the Committee could do that, and modify it if needed, during the MUTCD adoption process.

John Fisher asked for comments from the public.

Matt Schmitz, FHWA, noted that this would be a revision to the Traffic Manual and he does not see any down side by doing that. The FHWA has not issued final ruling on this device, and in his view, it is still an experimental device.

Bill Wald said he supports Gerry's proposal.

Chairman Fisher asked for other comments. There were none.

**Motion:** Moved by Farhad Mansourian, seconded by Gerry Meis, to recommend that Caltrans adopt the text from Revision 2 of the MUTCD, Section 2B.11 into the Traffic Manual. The text is as follows:

“A changeable message sign that displays to approaching drivers the speed at which they are traveling may be installed in conjunction with a Speed Limit sign. If a changeable message sign displaying approach speeds is installed, the legend YOUR SPEED XX km/h (MPH) or such similar legend should be shown.”

Chairman Fisher asked for discussion on the Motion.

Farhad Mansourian noted that the Committee has recommended Caltrans adopt the feedback sign as was requested. Now, if a public agency wants to install a feedback sign, they do not need approval from the CTCDC.

Gerry agreed with Farhad's comments and added that if an agency wants to install a speed feedback sign with a speed limit sign, then they do not need experimentation. Gerry added that when Caltrans adopts the language as suggested, it will be posted on the website and the Committee will be advised.

Motion carried 7-0.

**Action:** Item completed.

**The California Policy is as follow:**

“A Vehicle Speed Feedback Sign that displays to approaching drivers the speed at which they are traveling may be installed in conjunction with an R-2 Speed Limit Sign. If a Vehicle Speed Feedback Sign displaying approach speeds is installed, the legend shall be YOUR SPEED XX. Legend shall be white, yellow, yellow-green or amber color on black background. When activated, lights shall be steady-burn conforming to the provisions of California Vehicle Code Sections 21466 and 21466.5.”

**03-4 Speed Feedback (Radar Speed) sign**

Chairman Fisher asked Ed von Borstel, sponsor of this item, to address the request.

Ed pointed out that he sponsored the next three items. The items are requests to experiment with the radar speed sign by the City of Vacaville, the City of San Mateo and the City of San Jose. He asked the Chair, with permission of the Committee, to allow the three cities to address these items jointly. Representatives from the cities are available to answer any questions from the Committee.

(continued)

Chairman Fisher stated, since the experiment request is same, the Cities may present their proposal jointly.

Russ Taft, School Safety Manager, City of San Jose, stated that to minimize duplication of presentations, the three cities planned their presentation together. The City of San Jose has collected data on the radar speed sign and it was submitted to the CTCDC for the record. The City developed the specifications by using the technology of a trailer mounted radar speed sign and asked ForTell Traffic, Inc. to make a sign accordingly. The sign was installed in September of 2001 and post data was collected. Overall results were encouraging, with a 5-7 mph reduction in speeds, when sign was in operation. Some observations were as follows:

- Most drivers notice the sign, however, only just over ½ noticed their speed registered on the sign.
- Only about ½ of the motorists who saw the sign, realized the speed on the sign pertained to them. This was not surprising because the street has two lanes in each direction.
- Nine out of ten drivers admitted that they knew they were in a school zone and that they were exceeding the speed limit. Only seven drivers indicated that they thought they were going 25 mph or less.
- When asked if they thought that the sign was effective, an overwhelming majority thought that the signs were, indeed effective. This was somewhat surprising considering only ½ thought that the sign's display applied to them.

Russ Taft introduced Martin Quan, City of San Mateo, who briefly discussed application of the sign.

Martin stated that the city of San Mateo would be installing this sign at three locations. The community is very much in agreement with installation of these signs. The height of the sign will be 9 feet above the ground to prevent vandalism. The display has a static speed limit message when the vehicle speed is below the programmed posted speed. When a motorist is over the speed limit the sign will display actual speed. This numeric portion of the sign changes according to the vehicle speed. The blank-out display could be programmed to keep the sign blank if a motorist is testing his speed or a "slow down" message could be programmed to advise a motorist to slow down. This message can be displayed when a vehicle travels above a user defined "max speed".

Chairman Fisher asked whether the sign would be hard-wired or solar powered?

Martin responded that the signs will be similar to those installed in San Jose and will be hard-wired.

Chairman Fisher commented that the agenda item is listed as a speed feedback sign, but the sign being discussed appears to be a variable speed sign. The sign has the option to display the speed limit and then your speed, if a vehicle is over the speed limit. Did the City of San Jose use a similar sign during the previous study? He noted that the item, which was earlier recommended by the Committee to Caltrans, was a speed feedback sign this means a display of the approaching vehicle speed.

Russ responded that all three cities are using the same format.

Chairman Fisher noted that there are a number of variations to these type of signs. During school hours the sign displays a speed limit of 25 mph and if a motorist is over the speed limit, it displays vehicle actual speed. He asked what the display would show outside of the school hours.

Martin responded that the sign would display the 25-mph speed.

Aggarwal, City of Vacaville and Alternate CTCDC Member, stated that the sign would be in operation only during a school assembly period, dismissal period or during extra school activities. After school hours, the sign will be blank. The other required static speed limit signs will be in place on the street. (continued)

## CTCDC MINUTES

June 5, 2003

Page 7 of 16

Chairman Fisher asked the representative from the City of Vacaville, whether he would like to address the Committee.

Ozzie Hilton, City of Vacaville, stated the city has a proposal to install radar speed signs at 28 locations which will cover nine elementary schools and one middle school. City staff had a wide range of discussions with the school districts, parents, police and with the City Manager's Office. Everyone agreed with the proposal. The sign will be in operation during the arrival and dismissal periods and the rest of time the sign will be blanked-out. The continuous operation of the sign would reduce the affect because motorists would get used to it. The sign will be an educational tool to remind motorists that they are in school zones and the speed limit is 25 mph. The sign will be supplementary to the existing static school speed limit signs.

Gerry Meis inquired about the mounting height of the sign.

Russ Taft responded that the City of San Jose mounted the sign at 12 feet above the ground. The sign is expensive and the City wants to prevent vandalism and knock downs by vehicles. It also provides motorists an advance notice about their speed and they have enough time to adjust it. Another reason is that there are a number of vehicles which are 7 feet or more in height, and the City wants the sign to be visible to approaching traffic. The size of the sign and lettering are larger than a regular speed limit sign.

Jacob Babico asked whether the study would include parking or no parking on the street and what affect it might have.

Russ responded that San Jose has parking at most of the locations.

Chairman Fisher inquired about the size of the sign and whether the wind load was considered in determining the post size.

Michael Montoya, Vendor, responded that the sign size is 45"(h) x 28.5"(w) x 4.5"(d) and the letter size is 6"(h) x 4"(w).

Farhad Mansourian pointed out that one of the pictures shows that the sign is mounted on the signal mast-arm. Would amber color of the sign create confusion with yellow traffic signals?

Russ responded that the sign would be in operation only during daytime and he does not believe there will be a problem.

Chairman Fisher asked whether the radar speed signs would be a supplement to the static signs.

Russ responded yes, all the standard school signs would be in place. When this becomes a standard traffic control device, the static speed limit sign could be eliminated. The radar speed sign could be used to display the appropriate speed for the street.

Bridget Lott commented that if you use a radar speed sign to display the school speed limit during and after school hours, it could confuse motorists about the real speed limit. She added that the regulatory static speed limit signs may be needed.

Aggarwal responded that the radar speed sign would be a supplement to the standard signs required in a school zone. The sign will operate only during school arrival and dismissal periods and the rest of the time the sign will be blanked-out. Basically, the proposed sign is a replacement for the speed trailer sign which is used by the law enforcement agencies and by other public agencies.

Bridget Lott stated that the trailer mounted radar speed sign has a speed limit sign and below that a "your speed" sign.

(continued)

## CTCDC MINUTES

June 5, 2003

Page 8 of 16

Jacob Babico agreed with Bridget's comments. The radar speed sign should be a supplement to the static sign, because this provides information to the driver about his speed versus to the posted speed. He also asked how this sign will be installed with school assembly C and school assembly B

Aggarwal reemphasized that the proposed radar speed sign will be a supplement to the existing signs and will be blank during off school hours.

Farhad Mansourian also agreed with Bridget's comments and added the action taken by the Committee earlier is about the sign which displays only vehicle speed. Farhad stated that the proposed sign is different than what Committee has already approved. Why not use the same set up.

There was a lengthy discussion among Committee Members and the three cities on the use of speed feedback signs. The three cities preferred to use the format they presented to the Committee. This alternately display "your speed" and the posted "speed limit."

Aggarwal suggested that since the Committee already has data from other cities, the collection of pre and post data should be waived.

The Committee's Secretary informed the Members that he has not received any data from the agencies that have conducted experiments.

Gerry Meis added that a larger sample of pre and post data would be helpful in making a decision on the use of this device in school zones.

Ed von Borstel added that the City of San Jose's previous study indicated that the sign has a positive impact on motorists in reducing speeds 5-7 mph. This request is to expand the previous experiment.

Farhad stated that two out of three previous approvals have a similar application. The letter in the agenda packet from the cities requesting approval to install signs and have asked for a waiver from the collection of pre and post data. When other agencies are still doing experimentation, in his opinion, the waiver cannot be granted for collection of data.

Aggarwal stated that he was under the impression the Committee had already received reports from other agencies on this device.

Farhad stated that the Committee Secretary has informed the Committee that data has not been received.

Russ added that the City of San Jose would continue collecting data on the additional 39 locations that are proposed under this request.

Carroll Pakaki, 3M, stated that the 3M sign displays "your speed" with the static speed limit sign. She suggested keeping uniformity in school zone signings.

Michael Montoya, ForTel Traffic, Inc., stated that they have studied their sign and if 3M has data on their set up, they both could be reviewed by the Committee to draw a conclusion.

Chairman Fisher noted that if the proposal is to display a "your speed" message on the sign, then experiment approval is not needed, because the Committee has already recommended adopting the speed feedback sign as a standard device.

Gerry Meis agreed with the comment.

(continued)

## CTCDC MINUTES

June 5, 2003

Page 9 of 16

Chairman Fisher thanked San Jose for the report submitted on the radar speed sign. A variety of data would be helpful to decide which format works best to keep uniformity in school zones. He noted that the Committee has not received data from any of the agency that has approval from the CTCDC except San Jose.

Gary Tsutsumi provided brief information about a similar sign they are using in the City of Stockton. The sign was helpful in reducing speeds. Gary stated that the City of Stockton would like to expand the program and asked the Committee to give approval. The City will provide feedback to the Committee on the success or failure of the sign. The City installed the sign at 7 ½ feet above the ground and used a steel post.

Chairman Fisher noted that the Committee has not received data from the City of Stockton or from others. The Committee allows different formats to determine which one works well and the committee can make recommendations to Caltrans for adoption.

Laura Wells, City of San Jose, stated that since the City is installing approximately 39 signs, they are willing to use both formats ("speed limit" with "your speed", and just "your speed" sign) to conduct a study and submit results to the Committee.

Chairman Fisher asked whether the proposed sign has the capability to shut off the speed limit message.

Laura wells responded yes.

Chairman Fisher further added that it means the sign has the capability to display different options. Such as:

- Blank-out, when not needed and still collect data about speeds.
- "Speed limit", "your speed", and "slow down",
- "Your speed" and "slow down",
- Just, "your speed".

Michael Montoya responded yes.

Matt Schmitz added that the MUTCD Revision 2 is very clear that "your speed" sign may be used with the static speed limit sign. The current MUTCD does not have a provision to allow speed limit changeable message sign (CMS) sign on the CMS with other options like your speed, slow down etc. Matt added a number of states have conducted experiments using speed CMS and it would be worth reviewing conclusions drawn by the FHWA. He advised that if federal funds are involved, the FHWA process should be included in the experimentation.

Chairman Fisher noted that the current MUTCD does have a variable-able speed limit sign. He asked Matt, since the MUTCD does not have a provision to use a CMS with "speed limit" and "your speed" on the same sign panel, should the federal experimental process be followed?

Matt responded yes. Matt stated that he believes the intent of the "your speed" sign was to install it with the static speed limit sign on the same post. In this way, the motorists see both messages together. He added that he would check with FHWA Headquarters Office to clarify this.

Farhad Mansourian commented that if the three cities would like to use the "speed feedback" sign, then they do not need experimental approval, because the Committee has approved this earlier. If the three cities prefer to use the format they proposed, then, he recommends the experiment be conducted by using half of each format.

Merry Banks commented that a survey should include which sign the motorists better understand. This will help in making a final decision and also keep uniformity and consistency. (continued)

Laura Wells commented that her suggestion was that the City could install both formats and report back to the Committee. She asked Farhad about his suggestion of using one half of each format. She added that that was not her proposal.

Farhad responded that his suggestion was to conduct an experiment using both formats. It is up to the City to determine how they would use both formats. He is not suggesting a particular strategy. Farhad noted that Russ had earlier indicated that the sign could be installed at the same location in different directions. The Committee is looking at these experiments to determine which format could be more effective.

Chairman Fisher asked to include the "slow down" message in the survey to find out whether the message has any impact on motorists. He asked whether there would be a single report or separate.

Farhad suggested having a separate report from each city and one consolidated combined report from all three cities.

Aggarwal responded that they would submit the reports as suggested.

Carol Pakaki 3M, questioned if the final report indicates that one sign is marginally better than others how would the Committee make a final decision?

Farhad responded that if the results of the experiment indicate that one format is better, then the Committee will recommend that format be adopted in California. The standards and specifications will not call for a specific manufacturer, instead, it will be a generic sign, so that any vendor can produce that type of sign.

Chairman Fisher asked for other comments, there were none.

**Motion:** Moved by Farhad Mansourian, seconded by Ed von Borstel, approve experimentation with the radar speed sign (speed limit and your speed) during school hours, as requested by the three Cities. Approximately one half of the experiment should use the two different formats. The experimental signs will be supplemental to the standard school signings (Assembly C and Assembly B). Motion carried 6-1. Bridget Lott voted against the motion.

The Chairman suggested the cities should consider Matt's comments regarding the federal process.

**Action:** Item approved for experimentation.

### **03-7 Vehicle Activated Lighted Stop Sign**

Chairman Fisher introduced the item. He noted that the City of Inglewood was requesting experimentation with a stop sign, which has imbedded multiple high intensity LEDs in the sign panel. He introduced Parviz Koupai, City of Inglewood, and asked him to address his request to the Committee.

Parviz Koupai told the Committee that the City of Inglewood, Department of Public Works, requested permission to conduct an experiment with a vehicle activated LED stop sign as a non-standard traffic control device. The purpose of the device is to increase the awareness about the presence of a stop sign and to reduce the accidents. The City of Inglewood has a high rate of accidents among all 45 Cities of the same size in Southern California. According to the State Office of Traffic Safety, the City of Inglewood was rated third for hit and run collisions and fifth for nighttime collisions in cities with a population of 100k to 150k in the year 2000. The City was first for fatal and injured pedestrian victims involving children under the age of 15, and second for all types of fatal and injured pedestrians. According to the Office of Traffic Safety, the overall composite collision figure places Inglewood 11<sup>th</sup> out of 45 Cities. To increase driver awareness of the stop sign the city proposes an on-demand visual queue by imbedding multiple high intensity LED light modules into the standard stop sign. These high intensity LED light modules will be activated by an approaching vehicle at a pre-determined distance from the stop sign that will allow the motorist to observe and safely stop their vehicle. The system can be A/C or solar powered. Parviz added that the City would provide before and after data to the Committee.

(continued)

Bridget Lott commented that if a driver does not stop at the stop sign it is a violation of the vehicle code and people are aware of that. What indication will motorists receive from the LEDs?

Parviz responded that the LEDs will draw attention and alert the driver about the stop.

Chairman Fisher asked whether the purpose of LEDs is to prevent the driver from running through a stop or to stop drivers who are moving at 5-mph through the stop or both.

Parviz responded that the City hopes the sign will encourage drivers to make a full stop. Specially, it will be helpful at nighttime, even though it is very visible during daytime.

Gerry Meis asked how long the LEDs would blink. If there is a queue of vehicles which activate the LEDs as they pass over the detectors will the LEDs blink continuously? What is the message for the driver? The purpose of a traffic control device is to provide a clear message to the motorist. What message will a driver get after a few blinks and then nothing or continuous blinking when there is a queue of vehicles?

Michael Harrison responded that if there is confusion with continuously blinking LEDs or the distance to the loop detectors, it could be easily fixed.

Chairman Fisher commented that there are various versions of a stop sign with flashing lights. One is with flashing beacons, above/below the sign panel, and which is approved for use on public roadways. Second is a BlinkerStop, with LEDs at the periphery of the sign, which is under experimentation. And now, a third one is with LEDs below the message and within the sign panel. Is there information available, that this format is better than the others?

Parviz responded that he does not have an answer to all the questions. That is the reason the City is asking for experimentation and will find out whether the sign has a positive impact on the motoring public or not.

Farhad Mansourian noted that the Committee has approved an experiment with the BlinkerStop sign. The vehicle activates this one. The approved BlinkerStop has the LEDs on periphery of the sign and LED blinks constantly. This proposal should be covered under the existing approval.

Gerry Meis commented that the Committee has a responsibility to see where, when and why LED would be considered on a traffic control device. There is a tendency to add LEDs on many traffic control devices. He strongly recommends that this device must follow the FHWA experimental process.

Michael Harrison responded that the City has indicated that they will follow the FHWA process concurrently with the CTCDC process.

Jacob Babico inquired about the location of loop detectors in relation to stop signs. He asked what criterion would be used to determine the distance of detectors from the stop limit line. Secondly, he suggested that the after study should include vandalism, because there is a major issue in regards to the vandalism of BlinkerStop sign.

Michael responded that the speed limit and braking reaction time was used to determine the distance of detectors. He added that a chart used was provided by the police department to determine the distance. Basically it will be a traffic engineer's discretion to determine a location in placing detectors.

Parviz added that the City would include the vandalism in the post study.

Jacob further asked whether the stop ahead sign would be used at the experiment locations.

Parviz responded that that would depend upon the location as well as geometrics. Parviz added that if the device proves to be a success, then it could be an alternative to traffic signals which are very expensive to install.

(continued)

## CTCDC MINUTES

June 5, 2003

Page 12 of 16

Jacob asked how could a stop sign be an alternative to a traffic signal? How do you address the operation of the roadway?

Parviz responded that the meaning of his statement was that the device could be used as an interim measure before the installation of traffic signals.

Farhad Mansourian asked Matt Schmitz, if the Committee asked the City to get approval from the FHWA before the CTCDC give approval, how long would the FHWA process take?

Matt responded that this request is very straightforward and should not take too long. The City should be able to get an approval or denial response in a timely manner. The FHWA would review their pre and post data collection criteria and they could comment on that.

Matt further added that some vendors are very familiar with the FHWA process and they should start working with them to get approval before they come to the CTCDC for approval. This will reduce delay, because the CTCDC meets every 3-4 months and an experimental proposal can be submitted to the FHWA any time.

Farhad agreed with Matt's comments. If an agency determines that the device is non-standard and they need approval to install, they should contact FHWA right away for approval and that approval could be used to get approval from the CTCDC.

Chairman Fisher stated that suppose data provided to the Committee indicates the LEDs stop sign is more effective than the regular stop sign, he would like to know which way is better to go --to have LEDs embedded in the sign panel or to have the LED as a beacon format, above/below the stop signs. He asked the City of Inglewood, if they would consider an experiment by using both LEDs embedded in a sign panel and a beacon above/below the sign and submit their finding to the Committee. It will be helpful for the Committee to sort out which is better.

Parviz responded that the City would conduct an experiment using both alternatives and submit a before and after study to the Committee.

Merry Banks commented that if the FHWA asked the City to modify their experimentation methodology for the approval process they should inform the CTCDC about the changes for the record.

Chairman Fisher asked for other comments. There were none.

**Motion:** Moved by Gerry Meis, seconded by Farhad Mansourian, to approve the experiment request subject to FHWA approval. The City agrees to apply with FHWA for experiment approval and the CTCDC will concur with the FHWA decision. The City will notify the CTCDC Chairman in writing about the FHWA decision. Motion carried 7-0.

Chairman Fisher commented that the Committee should have a discussion on FHWA involvement with new traffic control devices. The Committee should have an understanding which items should be referred to the FHWA and which items could be handled by the CTCDC.

Farhad Mansourian and Gerry Meis agreed with the suggestion and the Committee Secretary will discuss with the Chairman to find out how and where to discuss this issue.

**Action:** The Committee deferred experiment request subject to the FHWA approval.

**02-9 Mandatory Requirement of Accessible Pedestrian Signals (APSS)**

Chairman Fisher advised the Committee and audience that the Committee has not received the summary of the Sub-Committee meeting minutes, which was held on March 12, 2003 with the blind community to discuss various issues related to the APSS. The Committee deferred hearing until the next meeting, but if any one in the audience is present to address this item, he can do so. There was none.

**Discussion Items**

**03-8 Steer Clear Sign (Drive Damaged Vehicle to Shoulder)**

Chairman Fisher asked Capt. Bridget Lott to address the discussion item "steer clear" sign. Bridget Lott introduced Officer John Olejnik, California Highway Patrol.

Officer John Olejnik, CHP, stated that the sign is a strategy to educate motorists involved in a non-injury or property damage incident to move their vehicle onto the shoulder. This type of sign has been used in the State of Ohio. John added that their Office does not have an official position at this time, but would like to explore ideas whether the sign will be helpful in congested areas to encourage motorists to move out from the traffic to the shoulder area. This sign essentially would advise motorists that if they are involved in property damage or non-injury collision only, they do not have to stay in the traffic lane until police arrive at the scene. They can move to the shoulder. It is also supported by California Vehicle Code (CVC) Section 20002. The sign would be a helpful tool to reduce non-recurring congestion from congested highways, such as Bay Area, Los Angeles or other highways having a congestion problem. John asked for input or suggestions from Committee Members.

Chairman Fisher asked whether motorists are aware in non-injury or property damage incidents that they do not have to stay at the collision site.

Bridget Lott responded that throughout California there is a congestion problem and motorists do not understand what to do in a non-injury or property damage incidents because some police agencies want motorists to stay at the incident location until they arrive. On the other hand, CHP prefer motorists involved in a non-injury or property damage incident to move off the roadway onto the shoulder area.

Officer Olejnik further added that the sign may only be important in congested areas.

Bridget Lott added that the goal is to reduce congestion and prevent trailing incidents. The proposed sign is just a starting point. There might be better alternatives. The DMV handbook is an alternative to educate the public, but the book is getting thicker and thicker.

Gerry Meis stated the sign may have value and there may be locations where the sign could be beneficial. Gerry added that he has not discussed this within the Department.

Merry Banks suggested it might be a good topic to share with the public via radio and television.

Gerry Meis advised the Committee that Caltrans would work with the CHP to see if the matter needs further discussion by the CTCDC.

**03-9 Signs Required By California Vehicle Code (Golf Carts on the Highway, Golf Carts Crossing, CVC 21115, 21115.1, 21716, 38012 and 38025)**

Chairman Fisher asked Jacob Babico to address the agenda items for Golf Cart signs.

Jacob Babico stated that CVC Sections 21115 states that local agencies by resolution or ordinance may permit the driving of golf carts with vehicular traffic on a highway or portion of a highway. CVC 21716 states that except as provided in section 21115.1, no person shall operate a golf cart on any highway except in a speed zone of 25 mph or less. CVC Section 21115.1 says that a local authority, by resolution or ordinance may establish crossing zones for use by golf carts at any time other than darkness, on any street, other than a State highway, that has a posted speed limit of 45 mph or less and that is immediately adjacent to a golf course. Jacob stated that the Traffic Manual does not have signs which satisfy CVC Sections 21115, 21115.1 and 21716.

Jacob informed that recently he has received standards and specifications for the SW56, Golf Cart Symbol, SW56A, Golf Cart Crossing, and W79A, The Share The Road, signs from Caltrans, but all these signs are warning. In his opinion, since all three signs can be installed only after an ordinance or resolution has been passed by the local agency, they should be regulatory signs.

Chairman Fisher asked whether the SW56, Golf Cart Crossing and W79A, the Share The Road, education plaque need to be a should (regulatory) condition?

Jacob responded that basically there are two issues. One, the golf cart can share the road with regular vehicles and second the golf cart crossing. These signs can be installed only if a local authority passes a resolution or ordinance. Therefore, the signs should be regulatory.

Johnny Bhullar, Caltrans, stated that there is a special regulatory sign SR43, Golf Cart OK Daylight Hours, which was approved in 1986. The policy is *"the Golf Carts OK Daylight Hours sign shall be placed on roadways which local authorities have designated for combined use in accordance with Section 21115 of the vehicle code. Including the ordinance number on the sign is optional."* This sign satisfies Jacob's concern. Now, the other two signs, SW56 and W79A are warning signs and even though a resolution or ordinance places these signs, they still advise the traffic. Johnny added that the special signs like SR43, which are not currently shown in the Traffic Manual, would be addressed during the MUTCD adoption process.

Chairman Fisher added that the ordinance or resolution makes sure the signs are placed properly.

Farhad Mansourian recalled that the SR43 sign was developed on behalf of the Palm Desert community after a lengthy discussion among Committee Member in open public hearing.

Gerry Meis suggested that Caltrans would review the current signs and CVC Sections to ensure that the signs satisfy the law. If there is a need to bring these back to the Committee, Caltrans will do that.

Jacob brought up another issue in regards to the sign "Off Highway Vehicles" which is covered under CVC Sections 38025 and 38012. Again, the sign is placed only if a local agency passes a resolution or ordinance. The message for the current sign is not clear. The sign policy and message indicates that the sign is for the State Highways. In San Bernardino County, there is a Special District, which wants to install this sign. Is there a way to clarify the message, so that the sign can be placed on local roads?

Gerry Meis asked the policy of the sign.

Jacob read the policy of the sign, *"the No Off Highway Vehicles beyond This Point sign (SR48) should be placed at the end of a Highway Vehicle Combined Use segment of highway."*

Gerry Meis advised the Committee that Caltrans would review the policy and message of the sign and see if a better message can be developed.

(continued)

Jacob stated that he wants to help their special district, so that they can install a better sign, which can be more understandable to the motoring public.

Chairman Fisher commented that people might not understand the meaning of Off Highway Vehicles. Under the Definitions of CVC Section 38012, examples are given about the vehicles.

David Royer commented that the message should be "vehicles with valid California licensee plates beyond this point." If you have a motorcycle with a valid California license, then you keep going. If you have a dirt bike only, you cannot go beyond this point.

Gerry Meis commented that there is a need to revisit the signs mentioned by Jacob and he will ask his staff to review these signs and determine if there is a better message which will also satisfy the CVC Sections. If there is a need to discuss with the Committee or Jacob Babico, he will do that. Any major change will be placed on agenda for Committee to review.

#### **99-11 MUTCD Adoption by Caltrans**

Gerry Meis asked Johnny Bhullar to brief the Committee and the audience on the progress of the MUTCD adoption in California along with the California Supplement.

Johnny Bhullar stated that there would be a number of workshops in the near future to discuss draft Parts 2, 3 and 6.

The draft text for Part 4 - Highway Traffic Signals is posted on the MUTCD Supplement web site and is now open for public comment. The following is the web site address for the California Supplement to the MUTCD: <http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/>

#### **Completed**

The following draft text is posted on the MUTCD Supplement web site and is now open for public comment.

- Part 4 - Highway Traffic Signals.

The following draft texts have been completed and submitted to the CTCDC for review. Upon the CTCDC recommendation, these parts will be posted on the web site and made available to the public for comment.

- Part 1 - General.
- Part 5 - Traffic Control Devices for Low-Volume Roads.
- Part 7 - Traffic Controls for School Areas.
- Part 8 - Traffic Controls for Highway-Rail Grade Crossings.
- Part 9 - Traffic Controls for Bicycle Facilities.
- Part 10 - Traffic Controls for Highway-Light Rail Transit Grade Crossings.

#### **In Progress**

The following draft texts are currently being prepared and will be submitted to the CTCDC for review by the end of June 2003:

- Part 2 - Signs.
- Part 3 - Markings.
- Part 6 - Temporary Traffic Control.

Johnny Bhullar stated those Parts 1, 5, 7, 8, 9 and 10 were submitted to Committee Members and comments were addressed. Johnny asked whether there is need of a Workshop to discuss these chapters.

Jacob Babico believes that a Workshop is needed to discuss at least Part 7, Traffic Controls for School Areas.

(continued)

## CTCDC MINUTES

June 5, 2003

Page 16 of 16

John Fisher commented that he was told there were very minimal comments on these parts and those comments were addressed by e-mail.

Johnny responded that he received comments on these parts from John Fisher and Jacob Babico only, and most of those comments have been addressed.

Chairman Fisher stated that if there is a concern on Part 7, the Committee could include Part 7 in the Workshop and post remaining Parts on the web for open comments.

Johnny agreed with the comments and he advised the Committee he would post Parts 1, 5, 8, 9 and 10 on the web for open comments.

Johnny further advised the Committee that he would be sending Part 6, 2 and 3 shortly for Committee's review and comments.

Chairman Fisher asked Johnny if these Parts require extensive review and if receiving all of them together might result in too great of a formidable and intimidating document to guarantee a thoughtful and timely review. He asked if these Parts could be sent by two-week intervals so that Committee Members could commit to review one part at a time.

Johnny agreed.

The Committee also discussed having the first Workshop by the end of July and the future Workshop date will be discussed during the July workshop.

### **Workshops**

Following is a suggested format for the CTCDC workshops. CTCDC will finalize schedule and location for these workshops.

- Workshop # 1 - Part 3 and 7. Duration 1 - 2 days. Workshop to be held on July 29, and July 30, 2003 in Sacramento. The timing for the 2<sup>nd</sup> Workshop will be determined during the first Workshop.
- Workshop # 2 - Part 2 and 6. Estimated duration 2 days.

Chairman Fisher noted that Committee Member should spare time to review drafts of the MUTCD and California Supplement, because this is an important task in a transition from the State Traffic Manual to the MUTCD.

### **Next CTCDC Meeting**

The next CTCDC meeting will be held on September 24, 2003 in Caltrans Office, at 1727 30<sup>th</sup> Street, Sacramento, CA 95816.

### **Adjourn**

The meeting was adjourned at 2:45 p.m.